

CLAIMS

1. An adhesive with high mechanical strength, characterized in that it contains a diacetal which is linear or cyclic, being able to be prepared from 5  $C_2$ - $C_6$  aldehydes and  $C_1$ - $C_{12}$  alcohols.
2. An adhesive according to claim 1, characterized in that it contains a diacetal prepared from  $C_2$ - $C_4$  aldehydes and  $C_1$ - $C_8$  alcohols.
3. An adhesive according to claim 1 or 2, characterized in that it contains a diacetal prepared from  $C_2$ - $C_3$  aldehydes and  $C_1$ - $C_3$  alcohols.
- 10 4. An adhesive according to one of claims 1 to 3, characterized in that it contains 1,1,2,2-tetramethoxyethane, 1,1,2,2-tetraethoxyethane, 1,1,2,2-tetrapropoxyethane, 1,1,3,3-tetramethoxypropane or 1,1,3,3-tetraethoxypropane.
- 15 5. An adhesive according to one of claims 1 to 4, characterized in that it contains 1,1,2,2-tetramethoxyethane.
6. An adhesive according to one of claims 1 to 5, characterized in that it contains any combination of two or three diacetals.
- 20 7. An adhesive according to one of claims 1 to 6, characterized in that it is an aminoresin adhesive, particularly of the melamine-urea-formaldehyde type.
8. Adhesive according to one of claims 1 to 6, characterized in that it is a phenolic resin adhesive, particularly of the phenol-formaldehyde type.
- 25 9. Adhesive according to one of claims 1 to 6, characterized in that it is an aminoresin, phenolic resin or resorcinol adhesive, with or without formaldehyde.
10. Adhesive according to claim 7, characterized in that it is based on a nitrogen compound/formaldehyde mixture in proportions of 1/0.2 to 3.
11. Adhesive according to claim 8, characterized in that it is based on a phenol/formaldehyde mixture in proportions of 1/0.7 to 2.8.
- 30 12. Adhesive according to one of claims 1 to 11, characterized in that the acetal or acetals represent 1.7 to 25% by weight of all of the constituents of the adhesive.
13. Agricultural waste or a wood composition such as fibreboards, particle boards, oriented strand boards or OSB, Medium and High Density

Fibreboards or MDF), and other types of similar boards and plywoods containing an adhesive as defined in one of claims 1 to 19 or prepared using such an adhesive.

14. A paper or laminated board containing a resin or adhesive as defined in one of claims 1 to 12 or prepared using a resin or adhesive as above, or a product prepared using such papers or laminated boards.

15. A method for the gluing of fibres in which fibres are glued using a resin or adhesive as defined in one of claims 1 to 12.